

I claim:

1. A utility vehicle which comprises:

an entry tube having a cross sectional size selected to enable a person to walk inside said tube from one end of said tube to another end;

means for supporting said entry tube on a plurality of wheels;

said entry tube having a free end and a pivotal end pivotally attached to one end of said means for supporting;

means for raising said free end of said entry tube to a height above a ground support surface of said utility vehicle by pivoting said entry tube around said pivotal end;

means for controlling raising said entry tube and for steering and driving said entry tube mounted on said means for supporting;

said means for controlling proximal to said free end;

means for driving said entry tube;

2.The utility vehicle of claim 1 wherein said entry tube has a rectangular cross section having a height that is vertical and a width that is horizontal when supported on said means for supporting.

3.The utility vehicle of claim 2 wherein said entry tube comprises:

a tail section having a pivotal end pivotally attached to pivot axis mounted on a rear end of said means for supporting;

a cab section having means for hingeably attaching said cab section to said opposite end of said tail section;

said cab section containing said means for controlling.

4. The utility vehicle of claim 2 wherein said means for supporting comprises:

a plurality of wheels;

a frame mounted on said plurality of wheels;

said tube having a tail end pivotally attached to an end of said frame.

5. The utility vehicle of claim 3 wherein said cab section comprises transparent panel.

6. The utility vehicle of claim 5 wherein said tail section comprises opaque panel.

7. The utility vehicle of claim 3 wherein said cab section comprises:

a cab floor having an edge hingably attached said tail section adjacent said opposite end and arranged to provide that a floor of said cab section is

continuous with a floor of said tail section. arranged to permit rolling a gurney conveniently from said cab section into said tail section.

8. The utility vehicle of claim 7 comprising:

a hydraulic ram (33A) with one end attached to said cab section (34) and another end attached to said tail section (38);

another hydraulic ram (33B) having one end (33B) attached to said frame (12) and another end attached to said tail section (38);

a pump (35) arranged to force oil into ram 33B and drain oil from ram 33B to raise cab section (34) and to pump oil into ram (33A) and drain oil from ram (33B) whereby said b section is lowered;

said pump and rams operably arranged to control elevation of said cab section and maintain said floor of said cab horizontally oriented.

9. The utility vehicle of claim 7 wherein said cab floor extends beyond said cab section.

a pair of tie rods, each said tie rod having a length about the same as a length of said tail section of said entry tube;

said each tie rod having a row of apertures, one aperture for each step and evenly spaced apart from its neighboring aperture by a distance equal to about said width;

a pin through each said aperture and into a hole in said short edge of a respective edge of said step whereby each said step is rotationally pinned to each tie rod;

a pair of cams, each said cam for one side of said entry tube opposite said other cam on an opposite side of said entry tube;

each said cam having a cam surface and mounted on said frame proximal to said tail end of said tail section of said entry tube;

each said tie rod having a lower end abutting a respective one of said cam surfaces;

said pair of tie rods with respective rows of apertures, said pair of tie rods, said cams, said cam surfaces, all operably arranged to provide that each said step, supported by a respective pair of pins in said tie rods and slidable contact of one of its long edges and a floor of said entry tube, is horizontal regardless of inclination of said tail end of said entry tube.

14. The utility vehicle of claim 13 comprising:

each said cam rotatably mounted on said frame arranged to provide that when said cam is rotated away from contact with said end of said tie rod, said stair collapses against said floor of said tail end of said entry tube;

each said cam being spring biased against rotation away from said contact with said tie rod;

a pair of levers, one for each tie rod and mounted proximal to said cab section, each lever having one end rotatably attached to said floor of said entry tube and rotatably attached to an end of a respective one of said tie rods;

said pair of levers arranged in operable combination with said pair of spring biased cams to provide that, when steps are flat against said floor, said steps are restored to horizontal inclination by pulling on said levers to permit lower ends of said levers to contact said respective cam surfaces.

15 The utility vehicle of claim 1 comprising a ladder slideably mounted on a roof of said entry tube and arranged to slideably extend in a direction over said cab section.

16 The utility vehicle of claim 15 comprising:

a capstan mounted on said entry tube;

a cord wrapped around said capstan and having a free end attached to said ladder operably arranged to enable extending said ladder over said cab section.

17 The utility vehicle of claim 1 comprising:

a hose;

means for storing said hose on an outside of said entry tube.

18 The utility vehicle of claim 17 further comprising

a pump mounted on said utility vehicle and connectable to said hose;

and connectable to a source of water;

means for supplying power for operating said pump;

19, The utility vehicle of claim 3 wherein:

said means for supporting comprises:

a substantially rectangular frame supported on at least a pair of front wheels mounted on a front axle and a pair of rear wheels mounted on a rear axle; and

said means for driving comprises:



a rear motor mounted on said frame between said frame and a ground surface supporting said wheels; and between said front wheels and said rear wheels;

a front motor mounted on said frame between said frame and a ground surface supporting said wheels; and between said front wheels and said rear wheels; and

wherein said rear motor is closest to said rear wheels and said front motor is closest to said front wheels;

means for coupling said rear motor to said rear wheels and for coupling said front motor to said front wheels.

20 The utility vehicle of claim 19 wherein said means for raising said free end of said entry tube comprises:

a partial gear mounted on an under side of said frame;

a worm gear engaging said partial gear;

said means for coupling includes means for selectively decoupling said rear motor from said rear wheels and coupling said rear motor to said worm gear;

said partial gear, worm gear, and means for coupling all arranged in operable combination to raise said free end of said entry tube when said means for coupling is selectively coupled to said worm gear.

21 The utility vehicle of claim 3 wherein said means for raising said free end of said tube comprises:

an extension of said tail section of said tube over hanging said another end pivotally attached to one end of said means for supporting;

a hydraulic ram mounted on said means for supporting said tube;

said ram having a piston;

means for energizing said ram to force a piston of said ram against said extension operably arranged to rotate said tube about said pivot axis.

22 The utility vehicle of claim 3 comprising:

a cab door between said tail section and said cab section.

23 The utility vehicle of claim 3 comprising:

an entrance door at said pivotal end of said tail section.

24 The utility vehicle of claim 23 wherein said entrance door comprises:

said entrance door having an opening;

a fan mounted on said entrance door and arranged to force air through said opening and out of said cab section.

25. The utility vehicle of claim 3 comprising:

a fan mounted close to said tail end arranged to force air from outside said entry tube, up through said entry tube and out through said cab section.

26. The utility vehicle of claim 3 comprising:

a cab door between said tail section and said cab section;

an entrance door at said pivotal end of said tail section;

a capped opening in a ceiling of said tail section;

said cab door constructed and said rear door constructed to permit filling said tail section with water when said cab door and entrance door are closed.

27. The utility vehicle of claim 3 comprising:

a cab door between said tail section and said cab section;

an entrance door at said pivotal end of said tail section;

a capped opening in a ceiling of said tail section;

a fan mounted on an outside of said entrance door and arranged to force air through an opening in said entrance and out of said cab section;

a vent door mounted on an inside surface of said entrance door and arranged to close said opening;

said cab door, said entrance door, said vent door constructed to permit filling said tail section with water when said cab door, entrance door and vent door are closed.

28. The utility vehicle of claim 1 wherein said height is 26 feet.

29. A rescue device which comprises:

a tube;

means for raising a free end of said tube to a height above a ground support surface.

a ladder mounted on a side of said tube.

30. The utility vehicle of claim 4 wherein said entry tube comprises:

a tail section having a pivotal end pivotally attached to pivot axis mounted on a rear end of said means for supporting;

a cab section having means for hingeably attaching said cab section to said opposite end of said tail section;

said cab section having a floor section that is joined to said cab section and is elevated when said cab section is elevated;

another floor section permanently mounted on said another floor section;

said means for controlling mounted on said another floor section providing that an operator is enabled to operate said means for driving when said tube is horizontal and said operator is enclosed in said cab

section and said operator is enabled to operate said means for driving when said operator is near said ground support surface.

31 The utility vehicle of claim 12 wherein said stairs comprise:

an upper connecting rod (91);

a lower connecting rod 92;

each said connecting rod having respective ends, (93 and 94) hingeably attached to said cab section 34;

each step (58) mounted on two vertical support rods (59);

each support rod (59) has a rotatably attached to said upper connecting rod (91) and lower connecting rod 92;

a roller (97) attached to an end of said lower connecting rod whereby an end of said lower connecting rod 92 is enabled to roll on a floor of said tail

section as said tube (14) is tilted to raise said cab section (34) and providing that a floor of said cab section (34) is maintained horizontal.